P a t e n t   C l a i m s :

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1.   A method of estimating pitch in a speech signal,
comprising the steps of:

 - sampling the speech signal to obtain a
   series of samples,

 - dividing the series of samples into
   segments, each segment having a fixed number
   of consecutive samples,

 - calculating for each segment a conformity
   function for the signal,

 - detecting peaks in the conformity function,

the method further comprising the steps of:

 - providing an intermediate signal derived
   from the speech signal,

 - converting said intermediate signal to a
   binary signal, said binary signal being set
   to logical "1" where the intermediate signal
   exceeds a pre-selected threshold and to
   logical "0" where the intermediate signal
   does not exceed the pre-selected threshold,

 - calculating an autocorrelation of the binary
   signal, and

•   using   distance   between   peaks   in   the
    autocorrelation of the binary signal as an
    estimate of the pitch.

5   2.   A method according to claim 1, wherein the
         intermediate signal is provided by filtering the
         speech signal through a filter based on a set of
         filter parameters estimated by using linear
         predictive analysis (LPA).

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    3.   A method according to claim 1, wherein the
         intermediate signal is provided by calculating
         the autocorrelation of a signal derived from the
         speech signal by filtering the speech signal
15   through a filter based on a set of filter
         parameters estimated by means of linear
         predictive analysis (LPA).

    4.   A method according to claim 1, further
20   comprising the step of:
         •   selecting, if the peak corresponding to the
             distance between the peaks is represented by
             a number of samples, the sample having the
             maximum amplitude of said conformity
25   function as the estimate of the pitch.

5. Use of the method according to claim 1 in a mobile telephone.

6. A device adapted to estimate pitch of a speech signal, comprising:

- a sampler for sampling the speech signal to obtain a series of samples,

- a divider for dividing the series of samples into segments, each segment having a fixed number of consecutive samples,

- an autocorrelation calculation unit for calculating for each segment a conformity function for the signal, and

- peak detector for detecting peaks in the conformity· function, the device further comprising a programmed unit:

- for providing an intermediate signal derived from the speech signal,

- for converting said intermediate signal to a binary signal, said binary signal being set to logical "1" where the intermediate signal exceeds a pre-selected threshold and to logical "0" where the intermediate signal does not exceed the pre-selected threshold,

- for calculating the autocorrelation of the binary signal, and

•   for using distance between peaks in the autocorrelation of the binary signal as an estimate of the pitch.

5   7.   A device according to claim 6, which includes a filter which is adapted to provide the intermediate signal by filtering the speech signal through the filter based on a set of filter parameters estimated by means of linear 10   predictive analysis (LFA).

    8.   A device according to claim 6, including a filter which is adapted to provide the intermediate signal by calculating an 15   autocorrelation of a signal derived from the speech signal by filtering the speech signal through the filter based on a set of filter parameters estimated by means of linear predictive analysis (LPA).

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    9.   A device according to claim 6, which is further adapted to select, if a peak corresponding to the distance between the peaks is represented by a number of samples, the sample having the 25   maximum amplitude of said conformity function as the estimate of the pitch.

10. A device according to claim 6, wherein the device is a mobile telephone.

11. A device according to claim 6, wherein the
5 device is an integrated circuit.